REMARKS

Claims 1-2 are now pending in the application. Applicants thank the Examiner for the courtesies extended to Applicants' representative, Jason A. Heist, during the telephonic interviews of June 10, 2008, and June 18, 2008. In the telephonic interviews, the processing history of the claimed invention in relation to the prior art was discussed and, specifically, the artificial aging conditions were discussed in the interview of June 18, 2008. With the exception of the artificial aging conditions, the Examiner agreed that the processing history of the claimed invention was the same as the prior art.

Alloys of the claimed invention and the prior art (JP '769) were cast from eight inch billets, subjected to a homogenization treatment, and hot-extruded. The hot extruded products were quenched and subjected to an artificial aging treatment using artificial aging conditions that heat treat the alloy at a temperature ranging between 160 to 195 C for 2 to 8 hours. See Table 1 of the present application. In contrast, JP '769 teaches artificial aging conditions that heat treat the alloy at a temperature ranging between 180 to 200 C. See paragraph [0009] of JP '769. The difference in artificial aging conditions is due to JP '769 attempting to enhance a strength of the alloy (see paragraph [0008] of JP '769), while the present application is directed to improving caulking properties.

To evaluate caulking properties, critical upsetting ratio may be used. Because JP '769 is directed to improving strength, however, JP '769 is silent as to caulking properties and to critical upsetting ratio. Notwithstanding, Applicant prepared Alloy Nos. 16 to 21 having compositions taught by JP '769 and manufactured them according to

the method listed above. That is, Alloy Nos. 16 to 21 have the same compositions, were cast from eight inch billets, subjected to a homogenization treatment, and hot-extruded. The hot extruded products were then quenched and subjected to an artificial aging treatment that heat treats the alloy. Alloy Nos. 19-21 were subjected to artificial aging conditions of 195 C for 3 hours like the alloys of JP '769.

Understanding that artificial aging conditions of 195C for 3 hours would increase the strength of Alloy Nos. 19-21 instead of increasing caulking properties (i.e., instead of increasing critical upsetting ratio), Applicant subjected Alloy Nos. 16-18 to artificial aging conditions of 170C for 4 hours to maximize the caulking properties of Alloy Nos. 16-18 and, therefore, maximize the critical upsetting ratio of Alloy Nos. 16-18.

As shown in Exhibits B and C, the critical upsetting ratios of Alloys Nos. 16 to 18 are higher than the critical upsetting ratios of Alloy Nos. 19 to 21. Although the critical upsetting ratio of Alloys Nos. 16-18 are higher than the critical upsetting ratios of Alloy Nos. 19-21, the critical upsetting ratios of the alloys according to the claimed invention are **higher** than the critical upsetting ratios of Alloys Nos. 16 to 18.

In other words, even though Alloy Nos. 16-18 were produced using the processing parameters that maximize critical upsetting ratio, the critical upsetting ratios of these alloys are inferior to that of the claimed invention. This surprising and unexpected. Because Alloy Nos. 16-18 exhibit an inferior critical upsetting ratio, Applicants respectfully assert that the claimed critical upsetting ratio is an unexpected result that renders the claims unobvious.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1-2 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 09-176769 (JP '769). This rejection is respectfully traversed.

Submitted herewith are supplemental affidavits under 37 CFR 1.132 traversing the rejection under 35 U.S.C. § 103(a) in view of JP '769. The supplemental affidavits include exhibits attached at Tabs A, B, and C. In the affidavits, the unexpected results regarding the claimed critical upsetting ratio are detailed with respect to comparative alloys that were selected from the teachings of JP '769. That is, critical upsetting ratios were calculated for the comparative alloys taught by JP '769 and these alloys do not achieve the claimed critical upsetting ratio of greater than or equal to 43%.

Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and

favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: July 18, 2008

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